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## DECISION MAKING

The essence of management is making decisions. Managers are constantly required to evaluate alternatives and make decisions regarding a wide range of matters. Just as there are different managerial styles, there are different decision-making styles. Decision making involves uncertainty and risk, and decision makers have varying degrees of risk aversion. Decision making also involves qualitative and quantitative analyses, and some decision makers prefer one form of analysis over the other. Decision making can be affected not only by rational judgment, but also by nonrational factors such as the personality of the decision maker, peer pressure, the organizational situation, and others.

Management guru Peter F. Drucker, as quoted in *Association Management*, identified eight "critically important" decision-making practices that successful executives follow. Each:

1. Ask "What needs to be done?"
2. Ask "What is right for the enterprise?"
3. Develop action plans
4. Take responsibility for decisions
5. Take responsibility for communicating
6. Focus on opportunities rather than problems
7. Run productive meetings
8. Think and say "we" rather than "I"

### POSING THE PROBLEM CORRECTLY

According to Ralph L. Keeney, professor at the University of Southern California's Marshall School of Business and co-author of *Smart Choices: A Practical Guide to Making Better Decisions*, managers commonly consider too few alternatives when making difficult decisions. When approaching a problem, decision makers need to regularly consider, starting at the outset, "Is this what I really need to decide?" In addition, the nature of the problem may change during the decision-making process, as either the situation changes or the decision maker's insights into the situation change.

By not formulating the problem correctly, decision makers risk missing a whole range of other alternatives. Decision makers can improve the chances of

asking the right question by probing objectives, goals, interests, fears, and aspirations. They also need to consider very carefully the consequences of each alternative. They can devise new alternatives through brainstorming and imagining as many options as possible, keeping in mind objectives, but not necessarily being entirely practical at first. In practice, action-oriented decision makers tend to focus on solutions without considering whether they are working on the right problem. Instead of choosing from decisions selected by others, decision makers need to review what decisions they should be addressing.

Managers in a corporate setting tend to view decision making differently than entrepreneurs. Since they are typically given a fixed amount of budgeted resources to work with, managers tend to define a problem in terms of what can be done with the resources at hand. Entrepreneurs, on the other hand, will likely pose the problem in terms of an objective—"This is what I want to get done"—and then worry about finding the resources to accomplish that objective. As a result, entrepreneurial decision makers will lay out a wider range of alternatives from which to choose. They feel less constrained by a lack of resources. To develop more alternatives, decision makers should release themselves from existing constraints, think imaginatively, and brainstorm with others, all the while keeping objectives clearly in mind and being honest about what they really need or desire.

### SYSTEMATIC ANALYSIS VS. INTUITIVE ANALYSIS

Entrepreneurs are famous for making "seat-of-the-pants" decisions, which means they make quick decisions based on a gut feeling or intuition. They are often forced to make decisions under conditions of uncertainty and without all of the necessary information. While some entrepreneurs are good decision makers, others need to be more cautious about the intuitive approach. One case against intuitive decision making comes from the credit industry. For example, some banks use scoring models for consumer and small business loans, but at times individual bankers override the automated system because they intuitively disagreed with the computer model's results. These loans, however, invariably have higher delinquency and charge off rates than loans approved by the computer model.

In some cases a person's intuition will be in conflict with the results of a more formal or systematic analysis, resulting in an uncomfortable feeling for the decision maker. What should a decision maker do then? Howard Raiffa, Harvard Business School professor emeritus, recommended in *Inc.*: "You should review both sides of the ledger to see if your intuition holds up when it is informed with some systematic

analysis. And if your analysis seems wrong intuitively, don't accept the analysis, just keep on probing." The uncomfortable feeling may be sending a message to the decision maker that it's not quite time to act, that perhaps a little more thinking about the problem is required.

Emotions are one of several nonrational factors that play a role in decision making. According to Raiffa, decision makers should pay attention to emotions and feelings when making decisions. By partially committing to one alternative, decision makers can give themselves a chance to "sleep on it," which then becomes a way of testing different alternatives. In spite of practical recommendations to not let emotions play a part in decision making, emotions do come into play because the decision maker cares about the consequences that may occur as a result of any decision made.

Making quick decisions, something managers are often required to do, does not necessarily mean sacrificing systematic decision making. Managers can prepare themselves for making quick decisions by practicing pre-decision making. This involves keeping in mind a decision-making structure, such as a series of probing questions that must be answered, as a contingency plan in the event a quick decision is needed.

## UNCERTAINTY AND RISK

Many decisions must be made in the absence of complete information. Decision makers often have to act without knowing for certain all of the consequences of their decisions. Uncertainty simply increases the number of possible outcomes, and the consequences of these outcomes should be considered. That is, it is important for the decision maker to identify what the uncertainties are, what the possible outcomes are, and what the consequences would be. Decision makers can sometimes clarify the problem they are working on by listing what could happen and assigning probabilities to each possible outcome (a formal representation of this is known as a *decision tree*).

Risk aversion is another nonrational factor affecting sound decision making. Studies have shown that people who exhibit risk-averse behavior in one setting will become risk-seekers when offered the same choice in a different setting. For example, most people will display risk-averse behavior by rejecting a fair gamble in favor of a certain gain. However, when the choice involves a fair gamble and a certain loss, most people display risk-seeking behavior by choosing the gamble over the certain loss, even though the risky choice may well result in an even greater loss.

The valuation of a risky alternative appears to depend more on the reference point from which a possible gain or loss will occur, than on the absolute gain to be realized. That is, the decision maker is motivated

not by the absolute performance of a particular alternative, but whether that alternative will perform better or worse relative to a specific reference point. Consequently, decision makers can be easily influenced by shifting reference points.

## DECISIONS BASED ON PRINCIPLES

Principled decision making can be a useful complement or alternative to analytical decision making. Principled decision making may or may not involve ethics. Ethical decision making uses ethical (moral) principles to make decisions, while principled decision making can employ all kinds of principles (i.e., including potentially unethical principles or decisions that lead to unethical outcomes). While not widely used, principled decision making is sometimes used by investment managers to manage risk and uncertain investments. Risk and portfolio managers may turn to principled decision making for complex risk management problems that cannot be modeled or solved.

Principled decision making emphasizes the process of decision making, with the end results of the decision being of secondary concern. It is essentially a two-step process, with the first step being to select and communicate the right principles to which decisions must adhere. The second step requires the decision maker to apply the appropriate principles. Principled decision making is easy to understand, and the principled decisions are easy to communicate to others in an organization.

Principles can be used to assist analytical decision making. For example, a portfolio manager may use principles as screens to segregate potential investments into acceptable and unacceptable categories. This effectively defines the search dimensions and reduces the sample space. Once principles have been used to reduce a problem to manageable size, then analytical techniques can be employed to make a final selection.

Principled decision making can be applied as an alternative to analytical decision making in such areas as organizational missions, goals, strategies, and codes of conduct. Sears, Roebuck and Co. was founded on the principle that the customer is always right, and that principle has served to guide corporate decisions over the years. Such principles, when used in decision making, can help the organization better cope with changes over time, shifts in leaders, fluctuating leadership styles, and changing market conditions.

## THE ROLE OF INFORMATION: DECISION SUPPORT SYSTEMS

Armed with information, managers can make better decisions. Frontline managers, for example, who are supplied with direct activity cost information,

can better manage revenues, margins, and costs. Organizations can achieve more consistency between upper management and lower-level managers by providing more information throughout the organization.

With Internet-hosted databases and user-friendly query tools becoming more common, corporations are turning to decision support systems (DSS) software to analyze the firm's databases and turn them into information useful for decision makers. DSS typically includes analytical and report-writing features, thus enabling users to translate raw data into a form useful for decision support.

Decision support technology is a relatively new development in software and may not yet be a high priority with the firm's information technology (IT) department. DSS, which offers users more flexible programming paradigms, can be compared to another type of software, enterprise resource planning (ERP), which enhances productivity by accelerating routine operations. DSS, on the other hand, slices and dices data that may be novel and complex into understandable chunks to facilitate shared consideration of multiple criteria.

One DSS technique is called analytic hierarchy process (AHP), which enables users to attack complex problems by reducing them to simpler pairwise comparisons between different combinations of options and criteria. When people are able to choose between pairs of options, their decisions are made more quickly and consistently than when larger sets of options must be considered. AHP was invented by Thomas Saaty, who cofounded Expert Choice Inc. (<http://www.expertchoice.com>) to provide AHP-related software and services.

DSS can result in significant time savings as well as improved decision making. Home products retailer Payless Cashways reported that its DSS software enabled it to realize a 70 percent time reduction in information and report gathering and a 30 percent rise in user productivity, along with reduced training time and better decisions on marketing, staffing, and warehousing. The company used DSS to extract and sort information related to sales volume, category performance, comparable-store sales, and in-stock figures.

DSS can speed collaboration when there are several decision makers who must be satisfied. By providing multiple users with access to the firm's data, DSS can clarify the decision-making process and enhance consistency among multiple decision makers. With electronic commerce competitors responding to strategic decisions within days or even hours, the speed with which decisions are made becomes more critical. DSS helps decision makers consider a wider range of alternatives in a shorter period of time. When more consideration is given to the probability and

value of the competition's response, strategic decision making becomes more like game theory.

## STRATEGIC DECISION MAKING

Strategic decisions are those that affect the direction of the firm. These major decisions concern areas such as new products and markets, acquisitions and mergers, subsidiaries and affiliates, joint ventures and strategic alliances, and other matters. Strategic decision making is usually conducted by the firm's top management, led by the CEO or president of the company.

In markets characterized by extreme competition and a rapid pace of change, companies are being forced to compete on the edge. Their strategic thinking can no longer be limited to identifying promising industries, core competencies, and strategic positions. Rather, top management is engaged in creating a continuing flow of temporary and shifting competitive advantages relative to other competitors and the market being served. As a result, greater emphasis is placed on efficient strategic decision making to create effective strategies.

Kathleen M. Eisenhardt, professor of strategy and organization at Stanford University, studied the strategic decision-making processes at different companies in high-velocity markets. Strategic decision makers at more effective firms were able to make quick, high-quality decisions that were widely supported throughout the firm. Her studies identified four areas in which effective strategic decision makers outperformed counterparts at less effective firms: (1) building collective intuition, (2) stimulating conflict, (3) maintaining a pace or schedule for decision making, and (4) defusing political behavior.

## PREDICTIVE MARKETS

Also termed "betting markets" or "idea markets," prediction markets emerged during 2004 as a way to assess consensus opinion about questions of importance to corporate decision makers. As discussed by James M. Pethokoukis in *U.S. News & World Report*, companies such as Hewlett-Packard and Dentsu were exploring use of prediction markets to forecast corporate figures such as revenues, advertising demand, consumer trends, and employee retention. These markets enable companies to determine what products or decisions are more likely to be successful and where to focus resources. Firms were still researching how well this works and where it could best be applied. A senior manager at Dentsu explained, "The key value we see is that prediction markets have the potential to extract the best essence from group knowledge, as an alternative to majority decisions."

## BUILDING COLLECTIVE INTUITION

Effective decision makers built a collective intuition by sharing information at “must-attend” meetings. They reviewed internal and external information, preferring real-time operational information over accounting-based data. At one firm each top manager was responsible for gathering and reporting data from a particular area. The managers gained an enhanced understanding of the data by discussing it from different perspectives at these meetings. The meetings also gave them a chance to get to know one another better, leading to open and direct interactions.

## STIMULATING CONFLICT

Many decision makers tend to avoid conflict, fearing it will bog down the decision-making process and degenerate into personal attacks. However, Eisenhardt’s studies found that in dynamic markets, conflict is a natural feature where reasonable managers will often diverge in assessments of how a market will develop. She found that conflict stimulates innovative thinking, creates a fuller understanding of options, and improves decision effectiveness. Without conflict, decision makers often overlooked key elements of a decision and missed opportunities to question assumptions.

Executives accelerated conflict by forming diverse executive teams made up of individuals who differed in age, gender, functional background, and corporate experience. Other techniques that can introduce conflict quicker include scenario planning, where teams systematically consider strategic decisions in light of several possible futures, and role playing, where executives advocate alternatives that they may or may not favor and play the role of competitors. Debate is encouraged and conflict stimulated when as broad a range of alternatives as possible is presented for discussion.

## MAINTAINING A SCHEDULE

Strategic decision makers are faced with a dilemma when they feel that every strategic decision they make is unique, yet they feel pressured to make decisions as quickly as possible. Effective decision makers overcome this dilemma by focusing on the pace of decision making, not the speed with which a decision is made. By using general rules of thumb regarding how long a particular type of decision should take, they maintain decision-making momentum by launching the decision-making process promptly, keeping up the energy surrounding the process, and cutting off debate at the appropriate time.

In order to keep to a specific time frame, executives can alter or adjust the scope of a particular decision to fit the allotted timeframe by viewing it as part of a larger web of strategic choices. Eisenhardt’s studies found that effective decision makers followed the natural rhythm of strategic choice. The rule for how long major decisions should take was a fairly constant two to four months. Decisions that would take less time were considered not important enough for the executive team, while those that appeared to take longer involved either too big an issue or management procrastination. By recognizing similarities among strategic decisions, such as those involving new products, new technologies, or acquisitions, executives could more easily gauge the scale of a decision.

One of the most effective methods for cutting off debate was a two-step method called “consensus with qualification.” The decision-making process is conducted with consensus as a goal. If consensus is achieved, then the decision is made. However, if there is no consensus, then the deadlock can be broken by using a decision rule such as voting or, more commonly, letting the executive with the largest stake in the outcome make the final decision. By taking a realistic view of conflict as both valuable and inevitable, consensus with qualification helps maintain the pace of decision making. It helps managers plan progress and emphasizes that keeping to schedule is more important than forging consensus or developing massive data analyses.

## DEFUSING POLITICS

The high stakes of strategic decision making can quickly turn the decision-making process into one of competition among ambitious managers. While less effective strategic decision makers view politics as a natural part of the decision-making process, effective strategic decision makers take a negative view of politicking. They not only see it as wasting valuable time, it can distort the information base, since politicking managers will tend to use information to their own advantage.

Politicking can be defused by emphasizing a collaborative, rather than competitive, environment, and by creating common goals. Rather than implying homogeneous thinking, common goals suggest that managers have a shared vision of where they want to be or who external competitors are. A balanced power structure, in which each key decision maker has a clear area of responsibility and the leader is recognized as the most powerful decision maker, can also defuse politicking among executives. The clear delineation of responsibility facilitates information sharing and other interaction, because each executive is operating from a secure power base. Finally, humor can defuse politicking and help build a collaborative outlook.

## AN EIGHT-STEP APPROACH TO MAKING BETTER DECISIONS

The following list is adapted from *Smart Choices* by Hammond, et al.:

1. Work on the right decision problem. Be careful in stating the problem, and avoid unwarranted assumptions and option-limiting prejudices.
2. Specify your objectives. Determine what you want to accomplish, and which of your interests, values, concerns, fears, and aspirations are the most relevant.
3. Create imaginative alternatives. Alternatives represent different courses of action, and your decision can be no better than your best alternative.
4. Understand the consequences. Determine how well different alternatives satisfy all of your objectives.
5. Grapple with your tradeoffs. Since objectives frequently conflict with each other, it becomes necessary to choose among less-than-perfect possibilities.
6. Clarify your uncertainties. Confront uncertainty by judging the likelihood of different outcomes and assessing their possible impacts.
7. Think hard about your risk tolerance. In order to choose an alternative with an acceptable level of risk, become conscious of how much risk you can tolerate.
8. Consider linked decisions. Many important decisions are linked over time. The key to making a series of decisions is to isolate and resolve near-term issues while gathering information relevant to issues that will arise later.

SEE ALSO: Decision Rules and Decision Analysis; Decision Support Systems

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### FURTHER READING:

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## DECISION RULES AND DECISION ANALYSIS

A decision rule is a logical statement of the type "if [condition], then [decision]." The following is an example of a decision rule experts might use to determine an investment quality rating:

If the year's margin is at least 4.27 percent and the year's ratio of shareholder funds to fixed assets is at least 35.2 percent, then the class of rating is at least lower investment grade (LIG).

The condition in this decision rule is "the year's margin is at least 4.27 percent and the year's ratio of shareholder funds to fixed assets is at least 35.2 percent," while "the class of rating is at least lower investment grade" is the decision part of the rule.

Decision rules give a synthetic, easily understandable, and generalized representation of the knowledge contained in a data set organized in an information table. The table's rows are labeled by objects, whereas columns are labeled by attributes; entries in the body of the table are thus attribute values. If the objects are exemplary decisions given by a decision maker, then the decision rules represent the preferential attitude of the decision maker and enable understanding of the reasons for his or her preference.

People make decisions by searching for rules that provide good justification of their own choices. However, a direct statement of decision rules requires a great cognitive effort from the decision maker, who typically is more confident making exemplary decisions than explaining them. For this reason, the idea of inferring preference models in terms of decision rules from exemplary decisions provided by the decision maker is very attractive. The induction of rules from examples is a typical approach of artificial intelligence. It is concordant with the principle of posterior